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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,363	02/15/2002	W. Peter Hansen	2004229-0031	1493
24280	7590	08/18/2005	EXAMINER	
CHOATE, HALL & STEWART LLP TWO INTERNATIONAL PLACE BOSTON, MA 02110			NGUYEN, SANG H	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/076,363

Applicant(s)

HANSEN ET AL.

Examiner

Sang Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 11-14 is/are rejected.
- 7) ☒ Claim(s) 7-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Applicant's response to amendment and a Petition to Withdraw a Terminal Disclaimer and Petition to revive an unintentionally Abandoned Application filed on 05/31/05 has been entered. It is noted that the application contains claims 1-14 and claims 15-47 have been canceled by the amendment filed on 05/31/05.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6 and 11-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Hansen (U.S. Patent No. 6,400,453).

The applied reference has a common Union Biometrica, Inc. with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1 and 11; Hansen teaches all of features of claimed invention, for example, a system and method for sorting multicellular organisms comprising:

- a population of multicellular organisms (col.8 lines 30-40 and figures 1-2) comprising a plurality of spatially distinct, optically detectable, phenotypic characteristics considered to be a plurality of character of phenotype on the organisms (col.1 lines 29-50); and
- an instrument considered to be an optical detection system (18 of figure 2) for detecting the location of the spatially distinct, optically detectable, phenotypic characteristics on the organisms and for orienting the multicellular organism sample along its longitudinal axis of a sheath flow cell (16 of figure 2). See figures 1-13.

Regarding claims 2 and 12-14; Hansen teaches about a marker pattern (figures 12 and 13) comprises a plurality of spatially consistent first features spaced apart along a length of each organism (120 D of figure 13 or figure 4) and at least one second feature modifiable or inducible when the population multicellular organism is subjected to a test treatment (figures 2B), wherein the organisms are selected and deposited based on the location of the second feature with respect to the first features along the length of each organism (figure 13 and col.15 lines 15-65).

Regarding claim 3; Hansen discloses the instrument is a flow cytometer (col.3 lines 26-30) for processing elongate multicellular organisms.

Regarding claim 4; Hansen teaches about the instrument (figure 2) having the optical detection system (18 of figure 2B) coupled to a control processor (24 of figure

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2B) for measuring a gating signal of population of multicellular organisms over background signals (col.13 lines 7-20) from the detection system (18 of figure 2B).

Regarding claims 5-6; Hansen discloses the gating signal comprises light scattered in the forward direction or light attenuated by the organism in the forward direction (col.4 lines 62-65 and col.9 lines 40-47). See figures 5A-5B.

Allowable Subject Matter

Claims 7-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art cited on the attached form PTO-982 is the most relevant prior art known. However, Applicant's claimed invention distinguishes over the prior art for the following the reasons. The claims are allowable over the prior art of record because none of the references either alone or in combination, discloses or render obvious, a system for sorting multicellular organisms comprising all the specific elements with the specific combination including of first detector for detecting light over a solid angle of at least 20 degrees and over a collection angle of approximately 0.0 to 0.6 degrees in the horizontal axis and approximately 17 degrees in the vertical axis, for detecting passage of the organisms through the optical beams set forth claim 7.

Response to Arguments

Applicant's arguments filed on 05/31/05 have been fully considered but they are not persuasive. Hansen does not disclose or suggest an instrument system for

detecting the location of the spatially distinct, optically detectable, phenotypic characteristics on the organism.

This argument is not persuasive. Applicant does not show the different purposes between system for sorting multicellular organisms disclosed in Applicant's present invention and the Hansen references' system for selecting and disposing multicellular organisms, since all the features recited in the Hansen references and Applicant's Present Invention have the same results for accurately analyzing multicellular organisms and reducing the cost pharmaceutical development for sorting and depositing larger numbers of live populations with the same amount of time. Also, the Applicant argues that Hansen does not teach or suggest an instrument system for detecting the location of the spatially distinct, optically detectable, phenotypic characteristics on the organism. As stated in previous Office action, Hansen teaches all of feature of claimed invention such as a system for sorting multicellular organisms comprising an instrument considered to be an optical detection system (18 of figure 2) for detecting the location of the spatially distinct, optically detectable, phenotypic characteristics on the organisms and for orienting the multicellular organism sample along its longitudinal axis of a sheath flow cell (16 of figure 2). See figures 1-13.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Touge et al (5180065) discloses apparatus and method for fractionating particle in particle-suspended liquid.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Sang Nguyen whose telephone number (571)-272-2425. The Examiner can normally be reached on Monday through Friday From 9:30 AM to 6:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. Gregory J. Toatley, Jr., can be reached on (571) 272-2800 ext. 77. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

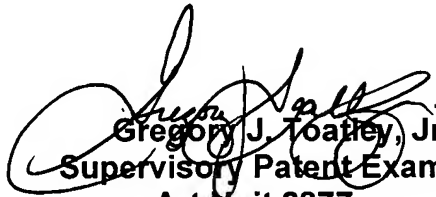
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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SN

Nguyen/sn

July 13, 2005


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Art Unit 2877
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20 July 05